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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,257	03/17/2005	Tong Huang	24429.PCT.US	4142

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EXAMINER	
GUIDOTTI, LAURA COLE	
ART UNIT	PAPER NUMBER
1744	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,257	HUANG, TONG	
	Examiner	Art Unit	
	Laura C. Guidotti	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *9-12* is/are allowed.

6)☒ Claim(s) *1, 2, 4, 6, 8/6* is/are rejected.

7)☒ Claim(s) *3, 5, 7, 8/7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 December 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12072006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The indicated allowability of claim 2 is withdrawn in view of the newly discovered reference(s) to Jones, US 4,929,205. Rejections based on the newly cited reference(s) follow.

Specification

2. The disclosure is objected to because of the following informalities:

Page 1 Line 15 of the Specification makes reference to Chinese Patent Application Number 00800767.5, however in the Applicant's remarks of 07 December 2006, the Applicant refers to this document as Chinese Patent Application Number 200800767.5. What is the correct document number?

Appropriate correction is required.

Claim Objections

3. Claims 1-12 are objected to because of the following informalities:

In each of independent claims 1, 6, and 9 there appears to be the same inadvertent spelling error. In each of Claims 1, 6, and 9 Line 7 it appears that the word "once" is meant to be "one".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 4/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson, US 6,634,052 in view of Tsui, US 6,206,978 and further in view of Jones, US 4,929,205.

Hanson discloses the claimed invention including an upper cover (where 26 is placed) with an air chamber (chamber within 10, Column 2 Lines 55-58; or gas filled pouch, Column 6 Lines 10-14), the upper cover being attached tightly to a bottom cover (16; Column 2 Lines 55-58), the bottom cover having a cleaning material layer attached underneath (18, 20; Column 1 Lines 66-67), and an inner cover with a magnet (24) located therein being provided inside the air chamber (the inner cover is the socket housing, flanges, or other protrusions, Column 2 Lines 44-50; not shown), the inner cover being attached to the bottom cover while isolated from the air chamber (when the inner cover is the socket for receiving 24), and that the upper cover has at least one through hole for adjusting the air volume of the air chamber (the through hole is the entire hole or opening where removable door 26 covers and is capable of adjusting the air volume remained in the chamber). Regarding claim 4 (4/1), the cleaning material layer adhering to the lower surface of the bottom cover is fiber (Column 1 Line 66 to Column 2 Line 6, as fabric or hook-and-loop material can be considered as being "fibrous"). Hanson does not disclose that the bottom cover has at least one convex edge or that there is a plurality of through holes.

Tsui teaches an aquarium tank cleaner (58) that is buoyant due to a float (73) and has a convex edge (70) in order to easily clean the inner surface of an aquarium

tank as the cleaner can go from one inner face of the tank to the adjacent inner face and also cleans the inner corner with greater ease (Column 4 Lines 15-34).

Jones teaches a buoyant device that employs two through holes that extend through its cover (openings not labeled, Column 2 Lines 46-51). There are two holes so that a user can adjust the buoyancy of the device (Column 3 Lines 8-12).

It would have been obvious for one of ordinary skill in the art to modify an edge of the device of Hanson to be convex, as Tsui teaches, in order to more easily clean inner corners of tank aquarium walls and so that a user can easily go from cleaning one inner face to the next inner face without a corner surface interruption and further it would have been obvious for one of ordinary skill in the art to modify the upper cover of Hanson and Tsui to have a plurality of through holes, as Jones teaches, so that a user can have two holes or openings of which to adjust the buoyancy of the magnetic device. Additionally, according to In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), "the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.)" (MPEP 2144.04).

5. Claims 2 and 4/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson, US 6,634,052, Tsui, US 6,206,978, and Jones, US 4,929,205 in view of DuMont, US 5,331,760.

Hanson, Tsui, and Jones disclose all elements mentioned above, however do not disclose that the through holes are provided with a sealing pad. Jones teaches a knob (26).

DuMont teaches that it is known for a buoyant device that employs a knob (such as 45) to be used in combination with a sealing pad (o-ring described in Column 4 Lines 37-43 is considered to be the sealing pad) to ensure that water does not enter the internal components of the device. It is well known in the art that o-rings are capable of performing such a function.

It would have been obvious for one of ordinary skill in the art to modify the through holes having the knobs of Hanson, Tsui, and Jones to further employ a sealing pad, as DuMont teaches, in order to ensure water does not enter in an opening or hole.

6. Claims 6 and 8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson, US 6,634,052 in view of Tsui, US 6,206,978 and further in view of DuMont, US 5,331,760.

Hanson discloses the claimed invention including an upper cover (where 26 is placed) with an air chamber (chamber within 10, Column 2 Lines 55-58; or gas filled pouch, Column 6 Lines 10-14), the upper cover being attached tightly to a bottom cover (16; Column 2 Lines 55-58), the bottom cover having a cleaning material layer attached underneath (18, 20; Column 1 Lines 66-67), and an inner cover with a magnet (24) located therein being provided inside the air chamber (the inner cover is the socket housing, flanges, or other protrusions, Column 2 Lines 44-50; not shown), the inner cover being attached to the bottom cover while isolated from the air chamber (when the inner cover is the socket for receiving 24), and that the upper cover has at least one through hole for adjusting the air volume of the air chamber (the through hole is the entire hole or opening where removable door 26 covers and is capable of adjusting the

air volume remained in the chamber), and there is a knob (26). Regarding claim 8 (8/6), the cleaning material layer adhering to the lower surface of the bottom cover is fiber (Column 1 Line 66 to Column 2 Line 6, as fabric or hook-and-loop material can be considered as being "fibrous"). Hanson does not disclose that the bottom cover has at least one convex edge or that the through hole is provided with a sealing pad.

Tsui teaches an aquarium tank cleaner (58) that is buoyant due to a float (73) and has a convex edge (70) in order to easily clean the inner surface of an aquarium tank as the cleaner can go from one inner face of the tank to the adjacent inner face and also cleans the inner corner with greater ease (Column 4 Lines 15-34).

DuMont teaches that it is known for a buoyant device that employs a knob (such as 45) to be used in combination with a sealing pad (o-ring described in Column 4 Lines 37-43 is considered to be the sealing pad) to ensure that water does not enter the internal components of the device. It is well known in the art that o-rings are capable of performing such a function.

It would have been obvious for one of ordinary skill in the art to modify an edge of the device of Hanson to be convex, as Tsui teaches, in order to more easily clean inner corners of tank aquarium walls and so that a user can easily go from cleaning one inner face to the next inner face without a corner surface interruption and further it would have been obvious for one of ordinary skill in the art to modify the knob and through hole of Hanson and Tsui to be provided with a sealing pad, as DuMont teaches, in order to ensure water does not enter in the through hole when the knob is in place.

Allowable Subject Matter

7. Claims 9-12 are allowed.

8. Claims 3, 5, 7, and 8/7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art made of record includes a device comprising an upper cover with an air chamber, the upper covering being attached tightly to a bottom cover, the bottom cover having a cleaning material layer attached underneath, an inner cover with a magnet located therein being provided inside the air chamber, said inner cover being attached to the bottom cover while isolated from the air chamber, said bottom cover having at least one convex edge, and said upper cover having at least one through hole for adjusting the air volume in the chamber; *and* wherein a magnet is provided inside the inner cover, the magnet being located in the convex/concave edge of the bottom cover and being pressed by an iron pad, a sponge pad being used to press the magnet and the iron pad, such that the magnet is fixed to the convex/concave edge between the inner cover and the bottom cover.

Response to Arguments

10. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine the references of Hanson and Tsui, the examiner recognizes that obviousness can only be

established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Hanson teaches an aquarium cleaning device having much of the claimed structure, however does not teach that the bottom cover has at least one convex edge. Tsui teaches an aquarium tank cleaner that has a convex edge (70) in order to easily clean the inner surface of an aquarium tank as the cleaner can go from one inner face of the tank to the adjacent inner face and also cleans the inner corner with greater ease (Column 4 Lines 15-34). Therefore, there is proper motivation and it would have been obvious for one of ordinary skill in the art to modify an edge of the device of Hanson to be convex, as Tsui teaches, in order to more easily clean inner corners of tank aquarium walls and so that a user can easily go from cleaning one inner face to the next inner face without a corner surface interruption. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura C Guidotti
Patent Examiner
Art Unit 1744

lcg